

## FEATURES

- DOUBLE LAYER CONSTRUCTION
- POWER BACK-UP FOR CMOS DEVICES
- SURFACE MOUNTABLE V-CHIP STYLE
- LEAD-FREE FINISH

\*For high temperature +85°C,  
high temperature reflow parts  
see the NEXCW series

## SUPER CAPACITOR APPLICATIONS GUIDE



## CHARACTERISTICS

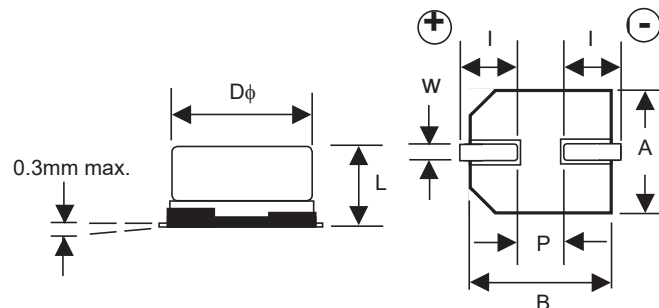
Rated Voltage Range	3.5 & 5.5VDC	
Rated Capacitance Range	0.047F ~ 1.0F (47,000µF ~ 1,000,000µF)	
Operating Temp. Range	-25°C ~ +70°C	
Capacitance Tolerance	+80%/-20% (Z)	
Load Life Test +70°C 1,000 hours	Δ Capacitance Change	Less than ±30% of initial measured value
	Maximum ESR	Less than 200% of the specified maximum value
	Current at 30 minutes	Less than 200% of the specified maximum value
Temperature Cycling (5 cycles, -25 ~ +70°C)	Δ Capacitance Change	Within +80%/-20% of specified value
	Maximum ESR	Less than specified maximum value
	Current at 30 minutes	Less than specified maximum value
Humidity Resistance (240 hours @ 40°C/90% RH)	Δ Capacitance Change	Less than ±20% of initial measured value
	Maximum ESR	Less than 120% of the specified maximum value
	Current at 30 minutes	Less than 120% of the specified maximum value

## STANDARD VALUES AND SPECIFICATIONS

NIC P/N	Capacitance Value (F) Discharge	Working Voltage (VDC)	Holding Voltage (VDC min.)	Max. Current @ 30 minutes (mA)	Max. ESR @ 1KHz (Ω)
NEXC104Z3.5V10.5X5.5TRF	0.1	3.5	-	0.090	50
NEXC224Z3.5V10.5X5.5TRF	0.22	3.5	-	0.200	25
NEXC474Z3.5V10.5X8.5TRF	0.47	3.5	-	0.420	25
NEXC473Z5.5V10.5X5.5TRF	0.047	5.5	4.2	0.071	50
NEXC104Z5.5V10.5X5.5TRF	0.1	5.5	4.2	0.150	25
NEXC224Z5.5V10.5X8.5TRF	0.22	5.5	4.2	0.330	25
NEXC474Z5.5V16X9.5TRF	0.47	5.5	4.2	0.710	13
NEXC105Z5.5V21X10.5TRF	1.0	5.5	4.2	1.500	7

## CASE DIMENSIONS (mm)

Case Size	Dφ ± 0.5	L max.	A/B ± 0.2	I	W	P
10.5 x 5.5	10.5	5.5	10.8	3.6 ± 0.5	1.2	5.0
10.5 x 8.5	10.5	8.5	10.8	3.6 ± 0.5	1.2	5.0
16 x 9.5	16.0	9.5	16.3	6.8 ± 1.0	1.2	5.0
21 x 10.5	21.0	10.5	21.6	7.0 ± 1.0	1.4	10.0



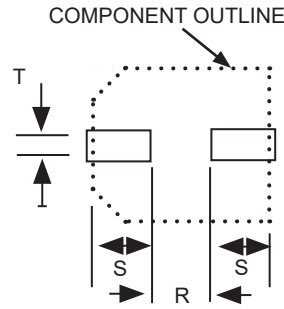
## PRECAUTIONS

Please review the notes on correct use, safety and precautions found at [https://www.niccomp.com/resource/files/double/Double\\_Layer\\_Capacitor\\_Guide\\_0810-RevBrA7.pdf](https://www.niccomp.com/resource/files/double/Double_Layer_Capacitor_Guide_0810-RevBrA7.pdf)  
If in doubt or uncertainty, please review your specific application - process details with NIC's technical support personnel: [tpmg@niccomp.com](mailto:tpmg@niccomp.com)

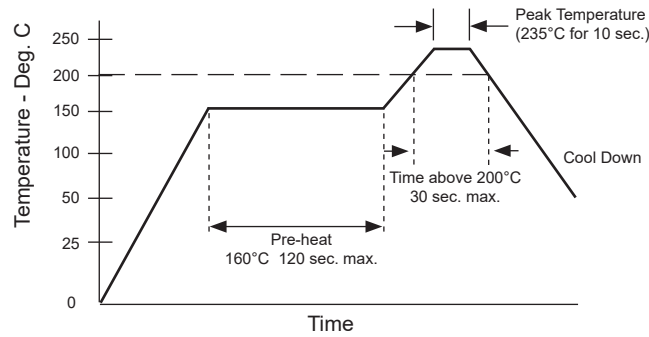


## LAND PATTERN DIMENSIONS (mm)

Case Diameter	R	S	T
10.5	5.0	4.6	2.5
16.0	5.0	10.0	2.5
21.0	10.0	10.5	3.5



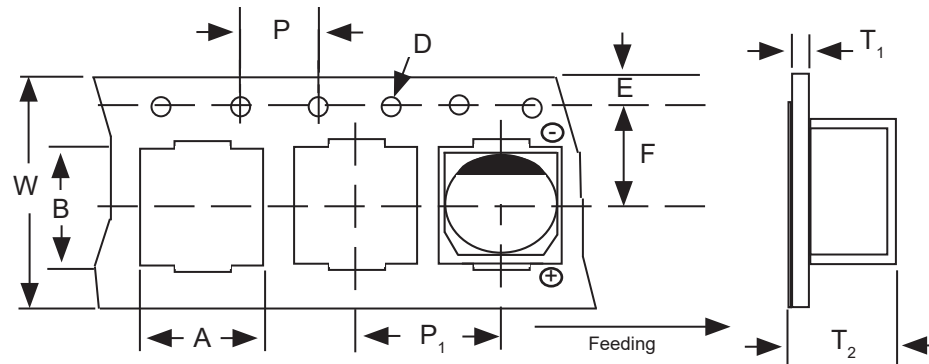
## STANDARD RECOMMENDED REFLOW PROFILE



1. The temperatures shown are the surface temperature values on the top of the can and on the capacitor terminals.
2. 2x reflow process maximum. Capacitor should be allowed to return to room temperature before second reflow process.

## CARRIER TAPE DIMENSIONS (mm)

Case Size	A	B	D	E	F	G	P	P <sub>1</sub>	T <sub>1</sub>	T <sub>2</sub>	W	Quantity/Reel
10.5 x 5.5	11.4	13.0	1.55	1.75	11.5	-	4.0	16.0	0.4	6.0	24.0	1,000
10.5 x 8.5	11.4	13.0	1.55	1.75	11.5	-	4.0	16.0	0.4	8.4	24.0	500
16 x 9.5	18.0	20.0	1.55	1.75	14.2	28.4	4.0	24.0	0.5	10.0	32.0	200
21 x 10.5	23.0	25.0	1.55	1.75	20.2	40.4	4.0	32.0	0.5	12.0	44.0	150



## REEL DIMENSIONS (mm)

Case Size	A ± 2.0	B ± 1.0	C ± 0.5	D ± 0.8	E ± 0.5	W	t
10.5 x 5.5	380	80.0	13.0	21.0	2.0	25.5	3.0
10.5 x 8.5	380	100.0	13.0	21.0	2.0	25.5	2.8
16 x 9.5	330	100.0	13.0	21.0	2.0	33.5	2.8
21 x 10.5	370	100.0	13.0	21.0	2.0	45.5	2.8

